

YELLOW-LEGGED GULLS (*LARUS CACHINNANS*) IN NORTH AMERICA

CLAUDIA WILDS¹ AND DAVID CZAPLAK²

ABSTRACT.—A specimen and two photographs of Yellow-legged Gulls (*Larus cachinnans*) are evidence of the occurrence of this species in North America. A description of a gull of definitive plumage, collected in the Madeleine Islands, Quebec, Canada, on 16 August 1973, previously has been published as that of a possible hybrid Herring Gull (*L. argentatus*) × Lesser Black-backed Gull (*L. fuscus*). Following detailed comparison to its suggested parent species and to *L. c. atlantis*, reassignment to this latter taxon is recommended, chiefly on the basis of the specimen's restricted but dense head-streaking and advanced primary molt in late summer, neither compatible with the other two species. A second occurrence in the winter of 1985 in St. Johns, Newfoundland, and a third in the winters of 1990–1993 in Washington, D.C., refer to two birds in definitive alternate plumage as early as January. Both had the large heads, sloped forecrowns, long, rather heavy bills, medium gray mantles, extensively black wing-tips, and bare-part colors characteristic of one of the two western subspecies (*atlantis* and *michahellis*) of *L. cachinnans*. Both photographic records have been reviewed by European consultants, the latter extensively so. Received 18 Feb. 1993, accepted 15 Sept. 1993.

Although the Yellow-legged Gull (*Larus cachinnans*) is not included in the avifauna of North America (American Ornithologists' Union 1983), its occurrence in the United States and Canada is documented by a specimen and by two sight records supported by photographs and field notes.

RECORDS

Quebec 1973.—The first Yellow-legged Gull in North America was encountered in the Madeleine Islands, Quebec, Canada, on 16 August 1973. The bird was collected, and the skin was deposited in the National Museum of Natural Sciences (now Canadian Museum of Nature), Ottawa (catalogue number 60750). Gosselin et al. (1986) published a full description of this individual, including key measurements and comparative photographs of the specimen with specimens of Herring Gulls (*L. argentatus smithsonianus*), *L. c. atlantis*, *L. c. michahellis*, and Lesser Black-backed Gulls (*L. fuscus graellsii*). Although the authors acknowledged that the bird was very similar to *L. c. atlantis* in virtually all respects, they concluded that it was possibly a hybrid, most probably of *L. a. smithsonianus* and *L. f. graellsii*. Either conclusion was compatible with the measurements of a male (Dwight 1925). The specimen could not be sexed because of damage, and worn outer primaries and molting rectrices prevented a precise measurement of the wing or a useful measurement of the tail. Their determination was apparently based on conjectural probability of occurrence, following Barth's suggestion (1968) that *atlantis* might be of hybrid origin, and on the specimen's wing pattern, in which "the black areas in the primaries seem less extensive [than in *atlantis*]."

¹ Dept. of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560.

² 13641 Ambassador Drive, Germantown, Maryland 20874.

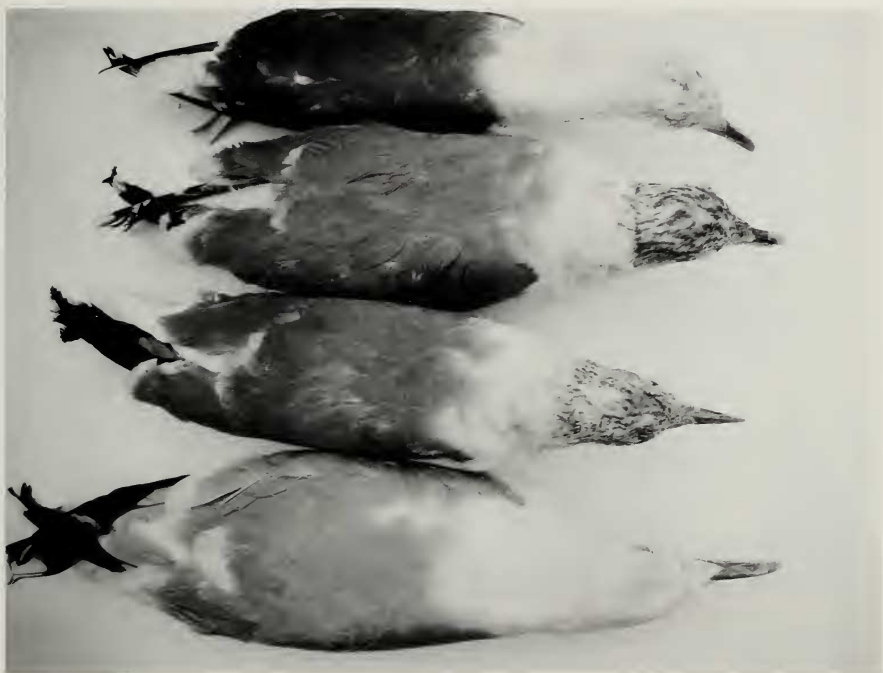


FIG. 1. (top to bottom) *Larus fuscus graellsii*, USNM 421801, female, Green Run, Maryland, 7 October 1948; *L. cachinnans atlantis*, NMNS 60750, unsexed, Iles-de-la-Madeleine, Quebec, 16 August 1973; *L. c. atlantis*, USNM 264097, female, Pico, Azores, 17 August 1921; *L. argentatus smithsonianus*, USNM 57546, male, Yukon Territory, 21 July 1972.

In the course of research related to the 1990–1993 record (discussed below), we examined a skin of *L. c. atlantis* in the U.S. National Museum (USNM 264097) collected in the Azores on 17 August 1921, 52 years earlier almost to the day than NMNS 60750. The published photographs and description of 60750 showed that the two birds were strikingly alike, and a direct comparison was arranged.

E. K. Barth (fide Gosselin et al. 1986) had measured the darkness of the mantle of 60750 as 4.5 on the Munsell scale, precisely matching his measurement of *atlantis* (the darkest of the *L. cachinnans* subspecies), and our visual comparison of it with 264097 and with specimens of the paler *L. c. michahellis* reinforced this assessment (Fig. 1). Though not reflected in the score, equally obvious to the eye was the lack of any brownish tone to the mantle color on either bird when compared to that of *graellsii*, a character noted by Dwight (1922) in the description of *atlantis*: “Compared with *affinis* [= *graellsii*], the nearest race [of *L. fuscus*] both in color and distribution, the mantle of *atlantis* is a clearer, paler, bluer gray without any of the brownish tinge that marks all the other races even in perfectly fresh plumage.”

Also identical on 60750 and 264097, both in shade and distribution, was the dense, sharp, rather uniformly dark head streaking (Fig. 2) covering all but the chin and throat and darkest around the eyes, a mark of definitive basic plumage characteristically acquired by *L. cach-*



FIG. 2. (left to right) *Larus fuscus graellsii*, USNM 421801, female, Green Run, Maryland, 7 October 1948; *L. cachinnans atlantis*, NMNS 60750, unsexed, Iles-de-la-Madeleine, Quebec, 16 August 1973; *L. c. atlantis*, USNM 264097, female, Pico, Azores, 17 August 1921; *L. argentatus smithsonianus*, USNM 57546, male, Yukon Territory, 21 July 1972.

innans in August. Head streaking is not obvious in either *L. a. smithsonianus* or *L. f. graellsii* until later in the year, adults of these two taxa typically developing their winter head patterns to full intensity during September and October (pers. obs.). In comparison to the two specimens, the head streaking of *graellsii* is similar in average darkness and sharpness, but usually somewhat more extensive; that of *smithsonianus* is paler, coarser, and less restricted, extending onto the breast in the form of mottled spotting; that of *michahellis* tends to be more restricted and less dense than that of *atlantis* except around the eye, often given the impression of a predominantly white head (Vercruysse 1984).

The advanced stage of primary molt also pointed to some form of *L. cachinnans* (Mayaud 1940, De Mesel 1990; on 60750 p8 was nearly full-grown, p9 was half-grown, and p10 had not yet been shed, giving a molt score of 42. Molt was less advanced on 264097 in which p6 was nearly full-grown, p7 was partially grown, and p8 to p10 had not been shed, giving a molt score of 32. On six other *atlantis* skins collected on 6 and 7 September, molt scores ranged from 34 to 42. In contrast, *argentatus* and *fuscus* adults typically complete primary molt between October and December (Cramp and Simmons 1983) and attain mid-August molt scores of less than 30 and less than 20 respectively (Harris 1971, Barth 1975a, Verbeek 1977, Walters 1978, Vandenbulcke 1989). No molt studies of *smithsonianus* have been published, but none of fourteen adults collected between 15 July and 27 August have a molt score higher than 24, and none collected before 20 November have completed primary molt.

Gosselin et al. (1986) explained the early primary molt in 60750 as that of a bird acquiring fourth-winter plumage—that is, attaining definitive Basic plumage for the first time—a hypothesis suggested to them by an incomplete black band on the bill. There is no other trace

of immaturity, however; and older, otherwise fully adult *L. cachinnans* (as well as other large gulls) in definitive basic have been seen with dark bill markings (Géroudet 1992). The old rectrices and outer primary coverts lack the brown or black markings typical of Basic III plumage. In addition, the heavily worn tenth primary of 60750 is black, not brown like an old third-year outer primary in August, and the large white subapical spot on that feather suggests that the bird was already in definitive basic plumage after its previous prebasic molt.

Harris et al. (1978), working in gull colonies off the Welsh coast, found three definite *L. a. argentatus* × *L. f. graellsii* hybrids recognizable by "a mid-grey mantle, pale yellow legs, and an orange-yellow eye-ring during the breeding season." The orange-red orbital ring and yellow legs of 60750 are characteristic of both *L. cachinnans* and *L. fuscus*.

With respect to the black areas on the primaries, several elements were evaluated: the black-and-white patterns at the tips of p10 and p9, the extent of black on the inner webs of p10 to p7, and the innermost primary with black.

On 60750 the large white mirror on p10 is separated from the white tip by a complete black band, and p9 lacks a mirror altogether. These patterns, both showing maximum black for *L. argentatus*, *L. cachinnans*, and *L. fuscus*, are common for both *atlantis* and *graellsii* and somewhat less common for *micahellis* (De Mesel 1990) and *smithsonianus* (found on 21 out of 72 specimens). (The skins of two *argentatus* × *fuscus* hybrids at the National Museum of Natural History, Leiden—RMNH 6818 and 33314—both have mirrors on p9; note, however, that the *L. argentatus* parent would not have been *smithsonianus* in these cases.)

P9 on 60750 had not grown out far enough for exact analysis of its inner web, but p10–p7 were assessed by using Tp values—a measure of the extent of black defined by Devillers and Potvliege (1981) as the distance from the distal tip of the gray tongue on the inner web to the proximal edge of the white tip. Tp 10 was measured at 178 mm; Tp9, all black from the sheath to the white tip, at 116, Tp8 at 60 mm, and Tp7 at 30.5 mm. The value for Tp10 exceeded the mean for *atlantis* by 20 mm and the exposed Tp9 value was 2 mm greater than the mean for that feather. Values for both Tp8 and Tp7, however, are below the measured range for all but one of 41 *atlantis* specimens examined: on a skin at the British Museum of Natural History (Tring), BM 1913.10.22.230, Tp8 = 45 and Tp7 = 24, whereas on the other skins the range for Tp8 was 68–168 and that for Tp7 was 31–67 (Wilds, unpubl. data). The two latter Tp values for 60750 are compatible with a *smithsonianus* × *graellsii* hybrid. The extent of black on the four outer primaries of 60750 relative to that on average wingtips of male *atlantis*, *micahellis*, and *smithsonianus* is illustrated in Fig. 3.

The fourth primary on the right wing is broken off near the base, but on the left wing it is intact and marked by a black spot on the outer web, as are the fifth primaries on both wings. This pattern (black to p4) is the most common one for *atlantis* and *graellsii*, and nearly as common on *micahellis*, but unusually extensive for *smithsonianus* (found on 10 out of 72 specimens).

Thus, the Tp8 and Tp7 values are lower than expected for *atlantis*, but within the range of the limited number of specimens studied. These low values do not seem large enough to dismiss the otherwise perfect match of 60750 with *atlantis* in respect to mantle color, wing-tip pattern, head pattern, soft-part colors, biometrics (though incomplete), and especially stage of molt. Only wing-tip pattern and biometrics are equally compatible with a possible hybrid (although some other features are within the range of the two hypothesized parent species). We therefore propose that NMNS 60750 be considered the first specimen of *L. cachinnans* taken in North America.

Newfoundland 1985.—The first sighting of a Yellow-legged Gull in North America was



FIG. 3. Underwing patterns showing the mean extent of black on the inner webs (Tp values) for primaries 10-7 in (A) *L. cachinnans michahellis*, (B) *L. a. smithsonianus* and (C) *L. c. atlantis*, and the actual distribution of black on p10-p7 on (D) *L. c. atlantis* NMNS 60750. Drawing by Claudia Angle.

made in Newfoundland in 1985 by Bruce Mactavish (Heil 1985). That bird, in definitive alternate plumage, was present at St. John's from 16 January to 15 April and was described in field notes and photographed, but neither the description nor the photographs were published. According to the notes, the size was similar to that of a Herring Gull, but the head and bill were more massive than in that species. The orbital ring was dull crimson, the legs dull yellow, and the eye yellow. The mantle was slate gray, intermediate between *smithsonianus* and *graellsii* but perhaps closer to the latter. The black of the wing-tip was more

extensive than on a Herring Gull, reaching at least p5 and nearly reaching the tips of the greater coverts on p7–p10. It had a large mirror on p10, separated from the white tip by a complete black band, and a small mirror on p9. The record was examined by the late Peter J. Grant, who expressed the opinion that the bird would have been judged a representative of the subspecies *micahellis* if it had been seen in England (Mactavish, pers. comm.).

Washington, D.C. 1990–1993.—On 1 February 1990, an adult Yellow-legged Gull was discovered by David Czaplak at Georgetown Reservoir in Washington, D.C. It remained until 7 February and was photographed in color. Detailed notes were taken by Czaplak, Claudia Wilds, Robert Hilton, and Willem Maane. Presumably the same individual (identical in size, proportions, coloration, and especially wing-tip pattern) was present at the reservoir, or at a landfill in nearby Laytonsville, Maryland, from 18 December 1990 to 21 March 1991, again from 26 December 1991 to 23 February 1992, and from 8 January to 28 March 1993.

The bird was studied at length on numerous dates under diverse lighting conditions. Distance from the observers at the reservoir varied from 20 m to 60 m. Present for comparison were adult Great Black-backed (*L. marinus*), Herring (*L. a. smithsonianus*), Lesser Black-backed (*L. f. graellsii*) and Ring-billed gulls (*L. delawarensis*). The following description is based on the notes and photographs of the above-mentioned observers, as well as those of Mary Gustafson, Ottavio Janni, Michael O'Brien, and Paul O'Brien, taken in 1990, 1991 and 1992.

Plumage.—The bird was, variably, in complete or nearly complete definitive alternate plumage, with entirely white tail and underparts. On the white head some observers noted a few faint, narrow streaks of gray on the forehead above the lores and above and behind the eye, as well as a very faint, diffuse spot of gray in front of the eye. These markings were present in December but usually absent by late January. Under most conditions, the head appeared immaculate.

The mantle was medium gray, distinctly darker and ashier than that of *smithsonianus* and distinctly paler and more bluish than that of *L. f. graellsii*, lacking its brownish tinge. Under most conditions, it appeared to observers to be closer in tone to *smithsonianus* than to *graellsii* (like *micahellis*), although it seemed relatively darker in late afternoon light or on overcast days. (The photographs, most of which were taken late in the day or on dark days, usually indicated a darker mantle closer to that of *graellsii* than to *smithsonianus* [like *atlantis*].) The white tips to the tertials and rearmost scapulars were narrower than on *smithsonianus* and formed thinner white crescents on the folded wing.

Only p10 had a white mirror. This was rectangular and covered both webs from edge to edge. It was completely separated from the white tip by a narrow black band less than one-fifth as long as the mirror. Primaries 8–10 were black on the outer webs almost up to the base. On the inner webs of p8–p10, a gray tongue extended roughly half-way from the base to the tip. These tongues were the same shade of gray as the mantle; they contrasted less with the black than on *smithsonianus*. P7 showed black on the outer web more than half-way to the base and black on the inner web for only a short distance, with the gray tongue on this web forming a distinct U shape. There was a diffuse paler border separating the gray of the U from the black. P6 was black on the outer web less than a third of the way to the base, and the black on the inner web was about half of the outer in length. P5 had a narrow black band across both webs, slightly wider on the outer web and only slightly wider than the white tip. There was a small black spot on p4, on the outer web only.

This distribution of black on the primaries resulted in a wing-tip showing much more black than in *smithsonianus*, with the black at the proximal ends of p6–10 forming an almost straight line across the wing nearly perpendicular to the trailing edge. On *smithsonianus* the gray of the mantle makes a much more noticeably convex intrusion into the black of the

wing-tip. On *graellsii* the extent of black is roughly similar to that on *L. cachinnans*, but there is much less contrast between the black and the dark gray of the mantle. These differences in the shape of black in the wing-tip among the three forms were seen quite easily during preening or in flight.

The underside of p10 showed the white mirror as on the dorsal surface, a black outer web, and a dark gray inner web. The rest of the primaries, as well as the secondaries, formed a gray subterminal band across the spread wing when seen from below. This pattern was quite different from the pale underwing of *smithsonianus* and somewhat paler than the dark underwing bar of *graellsii*.

Bare parts.—The iris was pale yellow. The orbital ring was an intense orange-red to vermilion, brighter and much more noticeable than in *smithsonianus*. It was not quite as deep a red as on *delawarensis* in alternate plumage. The bill had a large, bright red spot at the gonydeal angle, extending slightly onto the upper mandible. The tip was pale creamy yellow, and the rest was deep yellow to orange-yellow, depending on lighting conditions. The bill was much brighter than on most adult *smithsonianus* in January and February, and slightly deeper yellow than in those *smithsonianus* already reaching definitive alternate plumage. The legs and feet were a rich orange-yellow to pure, bright yellow, also depending on lighting conditions. Both the bill and legs were a richer, deeper yellow than on winter *graellsii*.

Size and structure.—The bird was about the same size overall as an average *smithsonianus*. Size impression depended on posture. The relatively large head and strong bill made the bird look slightly larger than a Herring Gull when alert, whereas at rest it looked about the same size or even slightly smaller. It was slightly more broad-chested when viewed from the front, and its stance was typically more horizontal than that of *smithsonianus*. It was not nearly so stout-bodied as *marinus*, and it lacked *graellsii*'s attenuated rear end.

The most distinctive structural differences were in the head and bill. Compared to *smithsonianus*, the head was both broader and longer. The forehead made a flatter angle with the bill and sloped more gently to the crown. The forehead, crown, and nape were more gradually curved, giving a more domed appearance to the head. The head shape was thus intermediate between *smithsonianus* and *marinus*. It did not in any way suggest *graellsii*, which has a narrower head, a sharper angle between the bill and forehead, and a much more squared-off crown and nape.

The bill was slightly longer than average for *smithsonianus* and marginally thicker as well. The gonydeal angle was slightly more prominent, and the tip was more square-ended. These features combined to give a distinctly heavier bill than in *smithsonianus* but still lacking the massive look of *marinus*.

Impressions of the bird in flight were brief, but the overall effect was distinctive. The wings were slightly broader and longer than *smithsonianus*. They lacked the long, narrow look of *graellsii*.

Evaluation of the record.—In response to requests by the Maryland/D.C. Records Committee, seven written opinions (two of them joint opinions) on the identity of the gull were obtained from W. R. P. Bourne, Alan Dean, Dirk De Mesel, Philippe J. Dubois, Paul Holt, W. Hoogendoorn, R. A. Hume, Norbert Roothaert and Pierre Yésou.

All agreed that the Georgetown bird belonged to *Larus cachinnans* (*sensu* Haffer [1982]), primarily on the basis of the combined characters of head- and bill-shape, bare-parts colors, mantle color, and extent and distribution of black in the wing-tips; some also mentioned the underwing pattern and minimal head streaking. Hume specifically stated that it was "not in the least like northern *argentatus* as we see them in the U.K. in winter." Most were cautious about pinpointing the exact subspecies, but several narrowed the choice to the two races of southwestern Europe, *L. c. atlantis* or *L. c. michahellis* or preferred one or the other.

The diversity in plumage and bare-parts colors among North American Herring Gulls, occasionally including yellow legs (Dwight 1925), may well have prevented earlier detection of *L. cachinnans* vagrants. On the other hand, the expansion of *L. c. michahellis* as a breeding bird west and north of the Mediterranean and as a post-breeding migrant north to 53°N is a very recent phenomenon. It is only in the 1980s and 1990s that the field characters for this subspecies (in definitive and juvenile plumages only) have been fully analyzed and published (especially Devillers and Potvliege 1981; Devillers 1983; van den Berg 1983; Dubois and Yésou 1984; Grant 1984, 1986; Harris et al. 1989; De Mesel 1990), and most of this literature is so little known in North America that some gullwatchers are still likely to regard a claimed sighting as presumptuous.

The occurrence of *L. c. atlantis*, considered a largely sedentary taxon, is less explicable. It should be noted, however, that the colonies in the western Azores, at 39°N, 31°W are due east of Delaware and due south of Greenland and thus far closer to North America than any other populations of *L. cachinnans*. Much less is known about its possible movements, perhaps because of the lack of banding or color-marking programs, and because of its similarity to *michahellis* when the two cannot be directly compared.

IDENTIFICATION

Although the yellow-legged gulls of Asia remain poorly known, they are now increasingly under study (e.g., Filchagov et al. 1992). Research on the European forms has exploded in the last twelve years and is continuing. Those familiar with both groups find them very different from each other.

The three European forms that have been assigned by all authors from Vaurie (1965) to the present (except for Barth 1968) either to *L. cachinnans* or to the *cachinnans* group of *L. argentatus*—nominate *cachinnans*, *michahellis*, and *atlantis*—have well-defined structural characters and color patterns that should make them readily identifiable in definitive plumage as to species and sometimes to subspecies.

All have a proportionately longer, heavier bill and bulkier head and body than *L. argentatus* or *L. fuscus*. All have a yellow bill with a red gonydeal spot, both colors typically brighter than in the other two species outside breeding season. All have an orange-red to vermilion orbital ring and yellow legs. All have a mantle paler than that of *L. f. graellsii* and darker than that of *L. a. argenteus*. On the underwing, the inner primaries and secondaries consistently form a broad gray subterminal bar. The black on the primaries extends inward to at least p5 and often to p4. All complete molt into definitive basic plumage earlier than the other two species: the head and body by early September and the primaries by late October at the latest. In basic plumage, head-streaking is much more restricted than on any subspecies of *L. argentatus* and is normally hard to see at any distance by early winter.

Of the three subspecies, *atlantis* should be the easiest to recognize (when in the company of other gulls) as some form of *L. cachinnans*

because of the color of its mantle, similar to that of a Laughing Gull, *L. atricilla*, and perceptibly lighter than that of *L. f. graellsii*, and its size, averaging smaller than *L. a. smithsonianus* and *L. c. michahellis* and slightly larger than *graellsii*. The wing-tip is extensively dark, with the slate-gray tongue on primaries 7–10 separated from the white tip by an increasingly wide (from p7 to p10) band of black (Mayaud 1940) forming a large black triangle. Tp values average 60% greater than for *smithsonianus* (Wilds, unpubl. data; Fig. 3). The ninth primary lacks a white mirror except in the Canary Islands population, where a small mirror is sometimes present (Devillers, in Cramp and Simmons 1983).

Nominate *cachinnans* is much more like *L. a. smithsonianus* in size and mantle color. The legs vary from "rather bright" yellow in the western Black Sea population (W. Hoogendoorn and Philippe J. Dubois, pers. comm.) to pale straw-yellow farther east (Nitecki, fide Chylarecki and Sikora 1991. Dubois suggests that this variation may be seasonal.) On the fully extended wing (as in flight or when landing), the long white (or very pale gray) tongue on the inner webs of p10 and p9 should be prominent from below, contrasting with the black outer web and band above the tip. P10 usually has a long white tip with no black band across it, or with at most an incomplete black band. P9 always has a mirror, often a large one extending from edge to edge of the feather (Kohl 1958, Mierauskas and Greimas 1992). Tp values are not available for this subspecies. If banding records are indicative (De Mesel 1990), this subspecies rarely reaches western Europe. (Only two recoveries west of Denmark—one in Germany and one in France—were reported through January 1990).

Larus c. michahellis is equal in size to *L. a. smithsonianus* or a little larger. Its mantle color is perceptibly darker in the field, between the shade of *smithsonianus* and that of a California Gull, *L. californicus californicus* (*sensu* Jehl 1987) and always obviously darker than Ring-billed Gull, *L. delawarensis*. The wing-tip pattern is distinctive. As in *atlantis*, the black on p10, p9, p8, and p7 extends well up the feathers, forming a large black triangle with the inner edge nearly straight-edged rather than crescent-shaped as in *smithsonianus*. The Tp values for p7–10 average 40% greater than for *smithsonianus* (De Mesel 1990; Wilds, unpubl. data; Fig. 3). The gray tongue above the black on the inner web of the outermost primaries is approximately the same shade as the mantle and inconspicuous. On p10, the tip pattern varies from being all white to showing a complete black subterminal band that defines a large mirror. On the majority of individuals, there is a mirror on p9; in Belgium, for example, 58.5 percent of captured females and 67 percent of captured males had a mirror on that feather (De Mesel 1990).

Although the juvenal plumage of *michahellis* is explained and illus-

trated by Dubois and Yésou (1984) and Harris et al. (1989), predefinitive plumages of *L. cachinnans* have not yet been fully described.

Several western Palearctic populations of gulls with yellow legs continue to cause puzzlement and controversy, and a vagrant from one of these groups might be easy to overlook and difficult to identify. It is unclear whether the birds that breed on the Atlantic coast of southern Morocco should be assigned to *michahellis* or *atlantis* or are intermediate between the two taxa. Specimens from this population have not been found in the museums we visited. There are no descriptions of these birds in the literature, and nothing is known of their movements. The Iberian "Cantabrian Gull," found on the Atlantic coast of Spain and possibly Portugal, is currently assigned to *michahellis* but, like *argenteus*, is a smaller, paler gull with proportionately shorter legs and a thinner bill (Joiris 1978; Teyssèdre 1983, 1984; Carrera et al. 1987; Dubois 1987). The Baltic "*omissus*" is thought by some to be a subspecies of *L. cachinnans* (e.g., Haffer 1982), by others to be a possible subspecies of *L. argentatus* (e.g., Mierauskas et al. 1991), and by still others to be no more than a variant of nominate *argentatus* (e.g., Barth 1968, 1975b). The yellow-legged individuals among the Herring Gulls *L. a. argentatus* of the Baltic and Scandinavia, including (or as well as) "*omissus*," differ structurally from *L. cachinnans* in having a shorter, thinner bill (Mierauskas et al. 1991). The wing-tip pattern lacks the extensive black on p7, p8, and p9, and thus the filled-in triangle (Devillers and Potvliege 1981), and might not be separable from that of a yellow-legged *smithsonianus* in the field, though p9 and p10 frequently show much more white on nominate *argentatus*. The mantle may be as dark as *michahellis* or as light as *smithsonianus*. In winter the bare parts are faded and dull, as in *smithsonianus*. Both the "Cantabrian Gull" and "*omissus*" have "long calls" much more like that of *L. argentatus* than like that of *L. cachinnans* (Teyssèdre 1984, Mierauskas et al. 1991).

A yellow-legged representative of *L. a. argentatus* could conceivably reach North America; the subspecies is found all around the shores of the North Sea, the English Channel, and the Atlantic coast of continental Europe in winter, including inland roosts, but is scarce on the west coast of Great Britain (Stanley et al. 1982, Coulson et al. 1984).

On the basis of the three individuals reported here, however, we expect that the two western subspecies of *L. cachinnans*—*atlantis* and *michahellis*—are the vagrant gulls with yellow legs most likely to be noticed if they find their way to the east coast of North America.

We hope that the publication of these details will improve the chances that Yellow-legged Gulls reaching North America will be recognized, closely examined, and satisfactorily documented.

ACKNOWLEDGMENTS

For access to the respective collections and for many kindnesses, we thank François Vuilleumier and Mary LeCroy of the American Museum of Natural History; Peter Colston at the British Museum of Natural History (Tring); C. S. Roselaar at the Institute of Taxonomic Zoology, Amsterdam; René Dekker at the National Museum of Natural History, Leiden; and David Lee and John Gerwin at the North Carolina Science Museum. Richard C. Banks obtained NMNS 60750 for our examination, reviewed this manuscript, and provided specific advice and general encouragement. Michel Gosselin sent the specimen to the U.S. National Museum from the Canadian Museum of Nature. He also generously supplied us with illuminating commentary, background information, and copies of correspondence relating to the record. Robert Hilton conducted extensive bibliographical research into the taxonomic history of the *Larus cachinnans-argentatus-fuscus* complex and supplied us with much useful literature. Bruce Mactavish provided photographs and detailed notes on the Newfoundland record and comments on the Georgetown Reservoir record and on this manuscript. W. (Ted) Hoogendoorn provided excellent opportunities to study *L. c. michahellis* in the field in direct comparison with *L. a. argentatus* and *L. a. argenteus*, as well as companionship, hospitality, and pertinent literature, in addition to reviewing this manuscript. W. R. P. Bourne compared photographs of the Georgetown Reservoir bird with skins at Tring. Arnoud van den Berg and Andreas Ranner contributed photographs of *michahellis*, and Lea Wilds photographs of *atlantis*. Kenn Kaufman provided annotated sketches. Dirk De Mesel sent raw data from his files to enable us to make a comparative study of Tp values, and S. Harvey Mudd and John Bjerke carried out the statistical analysis. Willem Maane translated papers from Dutch and German. Philippe J. Dubois and two anonymous reviewers reviewed this manuscript and made valuable suggestions for its improvement. We had useful discussions by mail or in person with Per Alström, Peter Barthel, Roger Clapp, Dirk De Mesel, Kenn Kaufman, Harry Lehto, Killian Mullarney, Andreas Ranner, Hadoram Shirihi, Arnoud van den Berg, and Pierre Yésou. Numerous observers also discussed the Georgetown Reservoir bird and assisted in tracking its movements over three winters, including David Abbott, Barry Cooper, Paul DuMont, Jon Dunn, Anthony Fletcher, Greg Gough, George Jett, Gail MacKiernan, Harvey Mudd, Brian Patteson, David Spector, Byron Swift, Mary Ann Todd, Anthony White, and Erika Wilson.

LITERATURE CITED

- AMERICAN ORNITHOLOGISTS' UNION. 1983. Check-list of North American birds. 6th ed. A. O. U., Washington, D.C.
- BARTH, E. K. 1968. The circumpolar systematics of *Larus argentatus* and *Larus fuscus* with special reference to the Norwegian populations. *Nytt Mag. Zool.* 15, suppl. 1: 1-50.
- . 1975a. Moults and taxonomy of the Herring Gull *Larus argentatus* and the Lesser Black-backed Gull *L. fuscus* in northwestern Europe. *Ibis* 117:384-387.
- . 1975b. Taxonomy of *Larus argentatus* and *Larus fuscus* in north-western Europe. *Ornis Scand.* 6:49-63.
- CARRERA, E., J. TRIAS, A. BEREMEJO, E. DE JUANA, AND J. VARELA. 1987. Etude biométrique des populations ibériques et nord-africaines du Goéland leucophaée *Larus cachinnans*. *L'Oiseau et R.F.O.* 57:32-38.
- CHYLARECKI, P. AND A. SIKORA. 1991. Yellow-legged Gulls in Poland: a comment. *Dutch Birding* 13:145-148.
- COULSON, J. C., P. MONAGHAN, J. E. BUTTERFIELD, N. DUNCAN, K. ENSOR, C. SHEDDEN, AND

- C. THOMAS. 1984. Scandinavian Herring Gulls wintering in Britain. *Ornis Scand.* 15: 79–88.
- CRAMP, S. AND K. E. L. SIMMONS, (EDS.) 1983. *Birds of the western Palearctic*. Vol. 3. Oxford Univ. Press, Oxford, England.
- DE MESEL, D. 1990. Geelpootmeeuwen, *Larus cachinnans michahellis*, in België, een analyse van ringgegevens. *Gerfaut* 80:25–56.
- DEVILLERS, P. 1983. Yellow-legged Herring Gulls on southern North Sea shores. *Br. Birds* 76:191–192.
- AND R. POTVLIÈGE. 1981. Le Goéland leucopnée, *Larus cachinnans michahellis*, en Belgique. *Gerfaut* 71:659–666.
- DUBOIS, P. J. 1987. Notes on the “Cantabrian” Herring Gull. Pp. 41–42 in *International field identification* (P. J. Grant, J. T. R. Sharrock, T. Taggar, and H. Shirihaï, eds.). International Birdwatching Center, Eilat, Israel.
- AND P. YÉSOU. 1984. Identification of juvenile Yellow-legged Herring Gulls. *Br. Birds* 77:344–348.
- DWIGHT, J. 1922. Description of a new race of the Lesser Black-backed Gull, from the Azores. *Am. Mus. Novitates* 44:1–2.
- . 1925. The Gulls (Laridae) of the world; their plumages, moults, variations, relationships and distribution. *Bull. Am. Mus. Nat. Hist.* 52:63–401.
- FILCHAGOV, A. V., P. YÉSOU, AND V. I. GRABOVSKY. 1992. Le Goéland du Taïmyr *Larus heuglini taimyrensis*: répartition et biologie estivales. *L'Oiseau et R.F.O.* 62:128–148.
- GÉROUDET, P. 1992. Les classes d'âges (1989–1990) et les comportements juvéniles chez les Goélands leucopnéés (*Larus cachinnans*) du Léman. *Nos Oiseaux* 41:397–403.
- GOSSELIN, M., N. DAVID, AND P. LAPORTE. 1986. Hybrid yellow-legged gull from the Madeleine Islands. *Am. Birds* 40:58–60.
- GRANT, P. J. 1984. Mystery photographs (Yellow-legged Gull). *Br. Birds* 77:476–479.
- . 1986. *Gulls, a guide to identification*. 2nd ed. T. & A. D. Poyser, Calton, England.
- HAFFER, J. 1982. Systematik und Taxonomie der *Larus argentatus*-Artengruppe. Pp. 502–514 in *Handbuch der Vögel Mitteleuropas*. Vol 8/1 (U. N. Glutz von Blotzheim and K. M. Bauer, eds.). Akademische Verlagsgesellschaft, Wiesbaden and Frankfurt, Germany.
- HARRIS, A. L., L. TUCKER, AND K. VINICOMBE. 1989. *The Macmillan field guide to bird identification*. Macmillan, London, England.
- HARRIS, M. P. 1971. Ecological adaptations of moult in some British gulls. *Bird Study* 18: 113–118.
- , C. MORLEY, AND G. H. GREEN. 1978. Hybridization of Herring and Lesser Black-backed gulls in Britain. *Bird Study* 25:161–166.
- HEIL, R. S. 1985. The winter season: northeastern maritime region. *Am. Birds* 39:145–148.
- JEHL, J. R., JR. 1987. Geographic variation and evolution in the California Gull (*Larus californicus*). *Auk* 104:421–428.
- JOIRIS, C. 1978. Le Goéland argenté portugais (*Larus argentatus lusitanius*), nouvelle forme de Goéland argenté à pattes jaunes. *Aves* 15:17–18.
- KOHL, I. 1958. Contributions to systematic studies of the Black Sea's Herring Gulls. *Aquila* 65:127–143.
- MAYAUD, N. 1940. Considérations sur les affinités et la systématique de *Larus fuscus* et *Larus argentatus*. *Alauda* 12:80–98.
- MIERAUSKAS, P. AND E. GREIMAS. 1992. Taxonomic status of yellow-legged Herring Gulls in eastern Baltic. *Dutch Birding* 14:91–94.
- , E. GREIMAS, AND V. BUZUN. 1991. A comparison of morphometrics, wing-tip

- pattern, and vocalizations between yellow-legged Herring Gulls (*Larus argentatus*) from eastern Baltic and *Larus cachinnans*. Acta Ornithologica Lituanica 4:3–26.
- STANLEY, P. I., T. BROUGH, M. R. FLETCHER, N. HORTON, AND J. B. A. ROCHARD. 1982. The origins of Herring Gulls wintering inland in southeast England. Bird Study 28:123–132.
- TEYSSÈDRE, A. 1983. Etude comparée de quatre populations de Goélands argentés à pattes jaunes d'Europe occidentale. L'Oiseau et R.F.O. 53:43–52.
- . 1984. Comparaison acoustique de *Larus argentatus argenteus*, *L. fuscus graellsii*, *L. cachinnans* (?) *michahellis* et du Goéland argenté à pattes jaunes Cantabrique. Behaviour 88:13–33.
- VAN DEN BERG, A. B. 1983. Yellow-legged Gull at IJmuiden in October 1982 and its identification. Dutch Birding 5:15–17.
- VANDENBULCKE, P. 1989. *Larus argentatus* ssp. en *Larus cachinnans* (*michahellis*) aan de Belgische kust: herkomst en verloop van de handpenrui. Gerfaut 79:31–53.
- VAURIE, C. 1965. The birds of the Palearctic fauna (Non-Passeriformes). Witherby, London, England.
- VERBEEK, N. A. M. 1977. Timing of primary moult in adult Herring Gulls and Lesser Black-backed Gulls. J. Ornith. 18:87–92.
- VERCRUYSE, B. 1984. Over de winterkoptekening bij adulte Geelpootmeeuwen *Larus cachinnans michahellis* in België. Wielewaal 50:241–244.
- WALTERS, J. 1978. The primary moult in four gull species near Amsterdam. Ardea 66: 32–47.